REMARKS

Careful consideration has been given to the Official Action of November 15, 2005 and reconsideration of the application as amended is respectfully requested.

Claims 2-24 and 41 are allowed.

Claims 25-29 and32-35 are rejected under 35 U.S.C. 103 as unpatentable over Gregory in view of Kimura and Variot.

Claims 30, 36 and 39-40 are rejected under 35 USC103 as unpatentable over Gregory as applied to claim 29 in view of EP 07008583.

Claim 25, the independent article claim has been amended to clearly distinguish over the cited art by specifying the support of the flexible foil by the support element to enable injection molding thereof. Hereafter, it will be shown in detail the clear distinction with the cited art.

Claim 35 has been amended to emphasize the separate characteristic of the unit formed by the foil and support enabling it to be placed in an injection mold.

Claim 42 has been added and is directed to the track unit and as will be shown hereafter with respect to claim 25 is deemed patentable over the cited art.

The amendments to claims 25, 35 and the content of claim 42 are fully supported by the Specification and drawings, for example, as set forth on page 12 in the paragraphs following the Description of the Preferred Embodiments.

Fundamentally, none of the cited references includes a teaching for providing an at least conductive track (foil) unit, or conductive track foil embedding unit, as now claimed.

In particular, in the present invention, a flexible conductive track foil (flexible printed circuit foil) is provided, and this foil is ultimately surrounded with plastics material by injection molding. This is a specific molding process in which relatively high pressures and forces are present in the mold which would cause problems with respect to deforming and displacing the flexible foil. To solve this problem, the flexile foil is connected to a prefabricated stiffening element, and in particular is arranged within a casing-like stiffening element, thereby obtaining the "embedding unit". After the injection molding, the "conductive track unit" is provided. Accordingly, the present unit comprises the stiffening element as a specific feature, said stiffening element carrying, in particular housing, said flexible track foil, and rendering the injection molding step possible without affecting said foil; in the finished state, the stiffening element together with the flexible foil is embedded within the injection molded plastics material.

Contrary to this, Gregory teaches placing a printed circuit pattern carrier 30 in a mold 80, and molding it to an insulation carrier without using a stiffening element; cf. in particular figs.5 and 6 of Gregory. According to fig. 10 the molded carrier may also form a cap-like

housing 207. However, as already mentioned, there is no teaching at all or providing a stiffening element, and of a mechanical combination of a flexible track foil with such a stiffening element, said stiffening element mechanically supporting and securing the flexible foil before and during the injection molding process. Instead, the clamping of the printed circuit pattern carrier 30 between the mold parts 85, 86, as may be seen from figs.5 and 6, in fact teaches away from the present invention where the entire unit is to be surrounded by plastics material, by injection molding, so that the flexible foil is to be arranged as a whole within the mold, namely in combination with the stiffening element, to avoid deflections and displacements during the injection molding process.

Kimura et al. disclose a completely different structure of an integrally molded PCB. Here, only the edges of PCBs 14, 15 are embedded in plastic resin, the plastic resin finally forming a housing for the PCBs, Again, no separate stiffening element is present, and this reference aims at specific mechanical connections between the PCBs and the resin enclosure, to allow for relative movements due to different thermal expansions. It is self-evident from the disclosure of Kimura et al. that the PCBs 14, 15 must be stiff themselves, to be able to provide for the disclosed connections during the molding process, and for that the connections are of use then with respect to the relative movements. Additionally, grooves and undercuts and the like are formed on the PCBs.

It is respectfully submitted that the examiner has not acknowledged the purpose of the separate stiffening element of the present invention. It is precisely this stiffening element which allows the embedding of the flexible foil in the plastics material by injection molding. Accordingly, the unit of claims 25 and 42 comprises three basic elements, namely (1) the foil;

(2) the stiffening element; and (3) the embedding plastics material surrounding the foil and the stiffening element. Contrary to this, Gregory as well as Kimura et al. only teach two elements.

With respect to the embedding unit of claim 35 etc., this is a two-element structure before injection molding embedment, and here, a prefabricated casing-like stiffening element is provided which simply accomodates the flexible foil, to protect it, and which, of course, has not yet been molded around the foil.

Finally, with respect to US 5,570,272 of Variot, this reference concerns an apparatus for encapsulating an integrated circuit package (a chip) comprising a semi-conductor element 202, where a completely different field of technology is given, when compared with the embedding of PCB foils, and where, of course, completely different problems are encountered. In particular, Variot teaches arranging the semiconductor element 202 on a heatsink 128 where attention must be paid to the fact that the bottom side of this heatsink remains free within the mold 200 during the encapsulating step. To this end, upstanding tie bars 120, 124 are provided which apply a force onto the heatsink 128 when the mold 200 (212, 214) is closed, namely via the contact tongues 116, so that no plastics material may enter at the interface between the heatsink 128 and the mold face 206. As seen, neither a flexible foil is disclosed here, nor a stiffening element for supporting and protecting such foil. Furthermore, no surrounding with plastics material by injection molding is taught.

In sum, a combination of the cited prior art references cannot lead to the present invention, since all the references fail to disclose a structure with a pre-fabricated stiffening

element supporting and protecting the flexible conductive track foil. It is submitted that the examiner has based the rejection on an inadmissible hindsight view, and on incidental similarities of elements shown in the prior art, without taking into consideration the actual structures.

Respectfully submitted,

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